## SEQUENCE LISTING

| <110> Ottawa Health Research Institute                              |     |
|---|-----|
| <120> Diabetogenic Epitopes   |     |
| <130> 08899427WO  |     |
| <140> Unknown<br><141> Unknown                                      |     |
| <150> US 60/535,278<br><151> 2004-01-09                             |     |
| <160> 8   |     |
| <210> 1 <211> 10 <212> PRT <213> Artificial Sequence                |     |
| <220><br><223> epitope  |     |
| <400> 1   |     |
| Glu Glu Gln Leu Arg Glu Leu Arg Arg Gln 1 5 10                      |     |
| <210> 2 <211> 2018 <212> DNA <213> unknown                          |     |
| <220><br><223> wheat gene   |     |
| <400> 2   |     |
| atggcgacca gaggcagagc aaccatccct ctcctcttcc tcctgggcac aagccttctc   | 60  |
| ttegeegegg etgtttegge eteceatgae gaggaggagg acaggegegg tgggegeteg 1 | .20 |
| cttcagcggt gcgtgcagcg gtgccagcag gaccggccgc ggtactctca tgcccggtgc 1 | .80 |
| gtgcaggagt gccgggacga ccagcagcag cacggaaggc acgagcagga ggagcagggc 2 | 40  |
| cgcgggcatg gccggcacgg cgagggggag cgtgaggagg agcagggccg tggccgtggg 3 | 00  |
| cggcgcggcc agggagagcg tgaggaggag cagggccgtg gacgtgggcg gcgcggcgag 3 | 60  |
| ggagagegtg atgaggagea eggggatgge eggeggeegt aegtgttegg eeegegeage 4 | 20  |

| ttccgccgca t | catccggag  | cgaccacggg | ttcgtcaagg | cccttcgccc | gttcgacgaa | 480  |
|--------------|------------|------------|------------|------------|------------|------|
| gtgtccaggc t | ectccgggg  | catcaggaac | taccgtgtcg | ccatcatgga | ggtgaacccg | 540  |
| cgcgcgttcg t | .cgtgccggg | actcacggac | gcagacggcg | teggetaegt | cgctcaaggc | 600  |
| gagggggtgc t | gacggtgat  | cgagaacggc | gagaagcggt | cctacaccgt | caggcaaggc | 660  |
| gatgtgatcg t | ggcgccggc  | ggggtccatc | atgcacctgg | ccaacaccga | cggccggagg | 720  |
| aagctggtca t | cgccaagat  | tetecacace | atctccgtcc | ccggcaagtt | ccagtatttc | 780  |
| teggecaage o | eteteetege | tagtttgagc | aaacgcgtgc | tcacagcggc | gttaaagacc | 840  |
| teggatgage g | ggctgggtag | tctcttgggc | agccgccaag | gcaaggagga | ggaggagaag | 900  |
| tccatctcca t | cegteegege | gtcagaggag | cageteegeg | agctgcgtcg | ccaggcgtcc | 960  |
| gagggtgacc a | agggccacca | ctggcctctc | ccccgttcc  | gcggcgactc | gcgcgacacc | 1020 |
| ttcaacctcc t | tggagcagcg | ccccaagatc | gccaaccgcc | atggccgcct | ctacgaggcc | 1080 |
| gacgcccgta   | gcttccacgc | cctcgcccaa | cacgacgtcc | gcgtcgccgt | ggccaacatc | 1140 |
| acgccgggtt   | ctatgaccgc | gccctacctg | aacacccagt | cgttcaagct | cgccgtcgtg | 1200 |
| ctggaaggcg   | agggcgaggt | ggagatcgtc | tgcccgcacc | tcggccgcga | cagcgagcgc | 1260 |
| cgcgagcaag.  | agcacggcaa | gggcaggtgg | aggagcgagg | aagaggagga | cgaccggcgg | 1320 |
| cagcaacgcc   | gacgcgggtc | cggctccgag | tcggaggagg | agcaggacca | gcagaggtac | 1380 |
| cagacggtcc   | gegegegggt | gtcgcgcggc | teggegtteg | tggtgcccc  | cggccacccg | 1440 |
| gtggtggaga   | tegeetegte | ccgcggcagc | agcaacctcc | aggtggtgtg | cttcgagatc | 1500 |
| aacgccgaga   | ggaacgagcg | ggtgtgġctc | gccgggagga | acaacgtgat | cgccaagctg | 1560 |
| gacgaccccg   | cccaggagct | cgccttcggc | aggcccgcga | gggaggtgca | ggaggtgttc | 1620 |
| cgcgccaagġ ָ | atcagcagga | cgagggcttc | gtcgccggac | ccgagcagca | gcaggagcat | 1680 |
| gagcgcgggg   | accgccgccg | tggtgaccgc | gggcgcggcg | acgaagccgt | ggaggcgttc | 1740 |
| ctgaggatgg   | caaccgċcgc | gctctgaggc | ggcaaggccg | ctgttgttaa | gtgaatgtgt | 1800 |
| gagctggagc   | ccgtgccatt | tgagagctga | acttgtatgt | gtgtgtaagt | ttgtcagtac | 1860 |
| gcgggagtag   | cataaataag | tegtggcaeg | ggctcagtac | gatgatgtaa | gttgcgtacc | 1920 |
| taccttctac   | caaggcatgc | atgcccaaca | taaataaaca | caagggcgtt | gegeetettt | 1980 |
| ttcagtaaaa   | aaaaaaaaa  | aaaaaaaaa  | aaaaaaaa   |            |            | 2018 |

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<211> 588

<212> PRT

<213> unknown

<220>

<223> WP5212 sequence

<400> 3

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Thr Ser Leu Leu Phe Ala Ala Ala Val Ser Ala Ser His Asp Glu Glu 20 25 30

Glu Asp Arg Arg Gly Gly Arg Ser Leu Gln Arg Cys Val Gln Arg Cys
35 40 45

Gln Gln Asp Arg Pro Arg Tyr Ser His Ala Arg Cys Val Gln Glu Cys
50 55 60

Arg Asp Asp Gln Gln Gln His Gly Arg His Glu Gln Glu Glu Gln Gly 65 70 75 80

Arg Gly His Gly Arg His Gly Glu Glu Glu Glu Glu Glu Gly 85 90 95

Arg Gly Arg Gly Arg Gly Gln Gly Glu Arg Glu Glu Glu Gln Gly
100 105 110

Arg Gly Arg Gly Arg Gly Glu Gly Glu Arg Asp Glu Glu His Gly
115 120 125

Asp Gly Arg Arg Pro Tyr Val Phe Gly Pro Arg Ser Phe Arg Arg Ile 130 135 140

Ile Arg Ser Asp His Gly Phe Val Lys Ala Leu Arg Pro Phe Asp Glu 145 150 155 160

Val Ser Arg Leu Leu Arg Gly Ile Arg Asn Tyr Arg Val Ala Ile Met 165 170 175

Gly Val Gly Tyr Val Ala Gln Gly Glu Gly Val Leu Thr Val Ile Glu 195 200 205

Asn Gly Glu Lys Arg Ser Tyr Thr Val Arg Gln Gly Asp Val Ile Val 210 215 220

Ala Pro Ala Gly Ser Ile Met His Leu Ala Asn Thr Asp Gly Arg Arg 225 230 235 240

Lys Leu Val Ile Ala Lys Ile Leu His Thr Ile Ser Val Pro Gly Lys . 245 250 Phe Gln Tyr Phe Ser Ala Lys Pro Leu Leu Ala Ser Leu Ser Lys Arg 265 Val Leu Thr Ala Ala Leu Lys Thr Ser Asp Glu Arg Leu Gly Ser Leu 280 . 285 Leu Gly Ser Arg Gln Gly Lys Glu Glu Glu Lys Ser Ile Ser Ile 295 Val Arg Ala Ser Glu Glu Gln Leu Arg Glu Leu Arg Gln Ala Ser Glu Gly Asp Gln Gly His His Trp Pro Leu Pro Pro Phe Arg Gly Asp 330 Ser Arq Asp Thr Phe Asn Leu Leu Glu Gln Arg Pro Lys Ile Ala Asn 345 Arg His Gly Arg Leu Tyr Glu Ala Asp Ala Arg Ser Phe His Ala Leu 360 Ala Gln His Asp Val Arg Val Ala Val Ala Asn Ile Thr Pro Gly Ser 375 Met Thr Ala Pro Tyr Leu Asn Thr Gln Ser Phe Lys Leu Ala Val Val 385 Leu Glu Gly Glu Gly Val Glu Ile Val Cys Pro His Leu Gly Arg 410 Asp Ser Glu Arg Arg Glu Gln Glu His Gly Lys Gly Arg Trp Arg Ser 425 Glu Glu Glu Glu Asp Asp Arg Gln Gln Arg Arg Arg Gly Ser Gly 435 440 Ser Glu Ser Glu Glu Glu Gln Asp Gln Gln Arg Tyr Glu Thr Val Arg 455 Ala Arg Val Ser Arg Gly Ser Ala Phe Val Val Pro Pro Gly His Pro 470 Val Val Glu Ile Ala Ser Ser Arg Gly Ser Ser Asn Leu Gln Val Val 490 Cys Phe Glu Ile Asn Ala Glu Arg Asn Glu Arg Val Trp Leu Ala Gly 505 Arg Asn Asn Val Ile Ala Lys Leu Asp Asp Pro Ala Gln Glu Leu Ala 520 515 Phe Gly Arg Pro Ala Arg Glu Val Gln Glu Val Phe Arg Ala Lys Asp

530 535 540

Gln Gln Asp Glu Gly Phe Val Ala Gly Pro Glu Gln Gln Gln Glu His 545 550 555 560

Glu Arg Gly Asp Arg Arg Gly Asp Arg Gly Asp Glu Ala
565 570 575

Val Glu Ala Phe Leu Arg Met Ala Thr Ala Ala Leu 580 585

<210> 4

<211> 290

<212> PRT

<213> unknown

<220>

<223> alpha/beta gliadin A-II precursor

<400> 4

Met Lys Thr Phe Pro Ile Leu Ala Leu Leu Ala Ile Val Ala Thr Thr 1 5 10 15

Ala Thr Thr Ala Val Arg Val Pro Val Pro Gln Leu Gln Leu Gln Asn 20 25 30

Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Glu Gln 35 40 45

Gln Phe Gln Gly Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro 50 55 60

Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro 65 70 75 80

Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro 85. 90 95

Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Gln 100 105 110

Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln Leu Ile Pro Cys Arg 130 135 140

Asp Val Val Leu Gln Gln His Asn Ile Ala His Gly Ser Ser Gln Val 145 150 155 160

Leu Gln Glu Ser Thr Tyr Gln Leu Val Gln Gln Leu Cys Cys Gln Gln 165 170 175

Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala Ile His Asn Val 180 185 190

Val His Ala Ile Ile Leu His Gln Gln His His His Gln Gln Gln 195 200 205

Gln Gln Gln Gln Gln Gln Pro Leu Ser Gln Val Ser Phe Gln Gln 210 215 220

Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly Phe Phe Gln Pro Ser Gln 225 230 235 240

Gln Asn Pro Gln Ala Gln Gly Ser Phe Gln Pro Gln Gln Leu Pro Gln
245 250 255

Phe Glu Glu Ile Arg Asn Leu Ala Leu Gln Thr Leu Pro Ala Met Cys 260 265 270

Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Phe Gly Ile Phe 275 280 285

Gly Thr 290

<210> 5

<211> 307

<212> PRT

<213> unknown

<220>

<223> alpha/beta gliadin MM1 precursor

<400> 5

Met Lys Thr Phe Leu Ile Leu Ala Leu Leu Ala Ile Val Ala Thr Thr 1 5 10 15

Ala Arg Ile Ala Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn 20 25 30

Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln 35 40 45

Gln Phe Pro Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro 50 55 60

Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro 65 70 75 80

Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr Pro 85 90 95

Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro Gln Gln 100 105 110

Pro Tyr Pro Gln Ser Gln Pro Gln Tyr Ser Gln Pro Gln Gln Pro Ile 115 120 125

Gln Gln Gln Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln Gln Leu 145 150 155 160

Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Ser Ile Ala Tyr Gly
165 170 175

Ser Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Val Gln Gln Leu 180 185 190

Cys Cys Gln Gln Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala 195 200 205

Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln Gln Gln Gln 210 215 220

Gln Gln Gln Gln Gln Gln Pro Leu Ser Gln Val Ser Phe Gln Gln 225 230 235 240

Pro Glm Gln Gln Tyr Pro Ser Gly Gln Gly Ser Phe Gln Pro Ser Gln
245 250 255

Gln Asm Pro Gln Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln 260 265 270

Phe Glu Glu Ile Arg Asn Leu Ala Leu Glu Thr Leu Pro Ala Met Cys 275 280 285

Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Val Gly Ile Phe 290 295 300

Gly Thr Asn 305

<210> 6

<211> 20

<212> PRT

<213> unknown

<220>

<223> diabetogenic epitope homopolymer

<400> 6

Glu Glu Gln Leu Arg Glu Leu Arg Gln Glu Glu Gln Leu Arg Glu

1 10 15

| Leu Arg A                                     | cg Gln<br>20 |   |  |  |    |
|---|--------------|---|--|--|----|
| <210> 7<br><211> 18<br><212> DNA<br><213> art |              |   |  |  |    |
| <220><br><223> pri<br><400> 7                 | mer          | · |  |  |    |
| accacgggt                                     | t cgtcaagg   | • |  |  | 18 |
| <210> 8<br><211> 18<br><212> DNA<br><213> art |              | · |  |  |    |
| <220><br><223> pri                            | mer          |   |  |  |    |
| <400> 8                                       |              |   |  |  |    |

18

aacacctcct gcacctcc